quite plain that the species is normally single-brooded in this latitude. On the other hand, a pair of adults, without doubt of the new brood, was taken *in copula* as late as July 26, from which was obtained a mass of ten eggs on the following day. Thus it is probable that in the southernmost limit of the species we may sometimes have produced an exceptional second generation in one year. This is of interest as the number of yearly generations of the elm-leaf species has been the subject of considerable controversy, the outcome being that careful observations by Professors Smith and Riley in the latitudes of northern New Jersey and the District of Columbia, respectively, have developed the fact that for that species in the former locality about the same condition of affairs in regard to generations obtains as in the golden-rod species here, whereas in the latter locality two, three, and exceptionally four broods of larvæ have been noted (see Proc., vol. II, pp. 364–365).

The life-history of *G. americana*, according to my observations, may be summed up about as follows: The hibernated adults may be seen towards the end of April, or soon after the foliage of the Solidago appears, and egg-laying continues at least throughout the month of May. The larvæ attain full growth by the end of May. The pupal stage occupies a week and the inactive stage of the mature larva and newly-bred adult consumes another week. About the middle of June the adults leave the pupal case and, after feeding for several days, perhaps weeks, leave the plants and begin hibernation. In this locality, at least, this beetle feeds only on Solidago and has thus far been found to feed only on a single species of this genus.

—Mr. Ashmead read the following:

LYSIOGNATHA, A NEW AND REMARKABLE GENUS IN THE ICHNEUMONIDÆ.

By William H. Ashmead.

Among a lot of miscellaneous parasitic Hymenoptera, principally Braconidæ, sent me for determination by Prof. J. Henry Comstock, of Cornell University, Ithaca, N. Y., through his assistant, Mr. Alexander MacGillivray, I found a most anomalous ichneumonid, represented in both sexes, having the head and jaws similar to an Alysiine in the Braconidæ, but otherwise, in venation and abdominal characteristics, agreeing with many forms found in the family Ichneumonidæ.

This singular insect at first was very perplexing to classify, but, after a thorough study of all its characters, I am convinced

it represents an ancient type of the family Ichneumonidæ, and probably the phylum from whence originated part of the Braconidæ —the Alsyiinæ. On account of its venation, however, it having a distinct areolet, two recurrent nervures, and its abdominal characters, I believe it should be placed as a distinct subfamily in the Ichneumonidæ.

This new genus may be thus characterized:

Lysiognatha genus nov.

Head, viewed from *above*, subquadrate, deeply emarginate posteriorly, full and broad behind the eyes, the vertex with a median sulcus extending to front ocellus; viewed from in *front* nearly twice as wide as long, the face therefore short, the clypeus extending from eye to eye and visible as a narrow transverse ridge; ocelli 3, rather close together in a triangle far away from the eye margin; eyes oblong oval extending to base of mandibles, the malar space entirely wanting; mandibles widely separated, attached to the side of the head as in *Alysia*, oblong, only slightly contracted at the middle, the apex being deeply emarginate and forming two nearly equal-sized teeth; maxillary palpi 5-jointed; labial palpi 3-jointed; antennæ inserted a little below the middle of the face, in ♀ very slightly thickened toward apex, 22-jointed, the last joint, however, apparently composed of 3 connate joints; in ♂ tapering towards tips, 25-jointed. Thorax ovate, the prothorax narrowed, triangular; mesonotum not longer than wide, without parapsidal furrows, the mesopleura convex, not impressed or foveated; scutellum subtriangular, with a deep furrow across the base; metanotum with two delicate median carinæ, divergent posteriorly, the lateral longitudinal carinæ subobsolete, the spiracles small rounded, placed toward the lateral middle; anterior wings as in *Pimpla*, with an oblique, subrhomboidal areolet, the second recurrent nervure entering the areolet near its apex, the median and submedian cells equal, the discoidal nervure angulate a little before the middle, legs normal, the tibial spurs 1, 2, 2, short, not strong. Abdomen in ♀ oblong-oval, sessile, subcompressed at apex and ending in a long ovipositor; first segment the longest, feebly bicarinate toward base, the spiracles very small, rounded, placed a little before the middle; the other segments smooth; the second segment is half as long as the first, the following gradually shortening. In the ♂ the abdomen is a more slender, with the first, second, third, and fourth segments with a ventral fold.

Lysiognatha comstockii sp. n.

♀.—Length 2 8 to 3 mm.; ovipositor longer than the abdomen. Reddish-brown, smooth and polished; anterior orbits broadly, face below antennæ, clypeus, mandibles, except teeth, mouth-parts, antennæ toward base, collar, tegulæ, legs and abdomen toward base, yellowish-white; ocelli, eyes, and tips of mandibular teeth, black. Antennæ 22-jointed, extending to base of abdomen, brownish toward apex and pubescent. Wings

hyaline, the venation pallid. Abdomen sessile, oblong-oval, a little longer than the head and thorax united, subcompressed at apex and ending in a long ovipositor.

In the male the head and thorax are black, the abdomen reddish-brown; anterior orbits, face below antennæ, mouth-parts, two basal joints of antennæ, prothorax, tegulæ, legs and sutures of the abdomen, yellowish-white, while the antennæ are a little longer, more slender toward apex, and composed of 25 joints.

Hab.—Cayuga Lake, Ithaca, N. Y.

Types in Collection Cornell University and Coll. Ashmead.

Described from 1 ♂ and 2 ♀ specimens received from Prof. J. Henry Comstock, collected by Mr. Herbert H. Smith.

Mr. Smith's record of the capture of a pair of these insects reads: "Swept from foliage in woods, *in copula*, at Norton's Landing, Cayuga Lake, June 26, 1872."

For some years past I have given considerable study to the Ichneumonidæ, basing my studies upon those of Förster's Synopsis, and in order to show the position that this new subfamily should hold in the family I would propose the following arrangement of the subfamilies and tribes:

Family ICHNEUMONIDÆ.

Subfamily I. LYSIOGNATHINÆ.

Subfamily II. OPHIONINÆ.

Tribe I. *Anomalonini.*
II. *Trachynotini.*
III. *Porizonini.*
IV. *Pristomerini.*
V. *Cremastini.*
VI. *Hellwigiini.*
VII. *Ophionini.*
VIII. *Campoplegini.*
IX. *Banchini.*
X. *Mesochorini.*
XI. *Plecticini.*
XII. *Agriotypini.*

Subfamily III. TRYPHONINÆ.

Tribe I. *Mesoleptini.*
II. *Exenterini.*
III. *Ctenopelmini.*
IV. *Tryphonini.*
V. *Exochini.*
VI. *Trachydermatini.*
VII. *Orthocentrini.*
VIII. *Bassini.*
IX. *Sphinctini.*
X. *Metopiini,*

Subfamily IV. Ichneumoninæ.
Tribe I. *Trogini.*
II. *Ichneumonini.*
III. *Alomyini.*
IV. *Listrodromini.*
V. *Phæogenini.*

Subfamily V. Cryptinæ.
Tribe I. *Stilpini*
II. *Hemitelini.*
III. *Phygadeuonini.*
IV. *Cryptini.*

Subfamily VI. Pimplinæ.
Tribe I. *Acœnitini.*
II. *Lissonitini.*
III. *Pimplini.*
IV. *Xoridini.*

My own collection is now arranged after the above scheme, and it appears to me a very natural one, so gradually do the subfamilies and tribes run into one another. The student must not forget, however, that at least sixty per cent. of our Ichneumonidæ are incorrectly placed in our lists and catalogues, and that an enormous amount of work must yet be done before our described species can be brought into their proper genera and tribes.

In discussion, Dr. Gill asked Mr. Ashmead to figure the typical mouth-parts of an ichneumonid so as to enable the Society to judge as to the limits of the variation. He further questioned Mr. Ashmead closely as to the significance of the extraordinary mouth of the new form, and concluded by suggesting that the insect deserves family rather than subfamily rank. Some discussion arose as to the use of the jaws in the Ichneumonidæ and Braconidæ. Mr. Marlatt stated that their sole use seemed to be to enable the insects to issue from their cocoons or from imprisoning substances; that, after issuing, the jaws are of little or no use, although he had known the larger Ichneumonids to bite when handled. Mr. Howard referred to the wing venation of the new form and stated that the presence or absence of the second recurrent nervure was, in his opinion, not a competent family character, and that from venation alone he would not consider the new form as necessarily an ichneumonid. Mr. Ashmead agreed with the last speaker, but stated that the abdominal char-